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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANG, AUDREY Y

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,390

Applicant(s)

VAAGE, JOAR

Examiner

Audrey Y. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-18, 20-24 and 29-41 is/are pending in the application.
- 4a) Of the above claim(s) 14, 20-24 and 29-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on June 21, 2006, which has been entered into the file.
- By this amendment, the applicant has amended claims 13, 15 and has canceled claims 19 and 25-28.
- **Claims 14, 20-24 and 29-41 are withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **by original presentation**, (please referred to the election and restriction requirement set forth in the previous Office Action).
- Claims 13, and 15-18 remain pending in this application.

Response to Amendment

1. The amendment filed **June 21, 2006** is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: claim 13 has been amended to include the feature having the first and second picture storage each being divided into *a plurality of memory areas* that are selectable for scanning. The specification fails to teach that the picture storages each has a plurality of **memory** areas. The specification only gives support for the picture storage has a plurality of storage areas, however this feature is drawn to NON-ELECTED species.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 13 and 15-18 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The reasons for rejections based on the newly added matters are set forth in the paragraph above.

Claim Objections

4. Claims 13 and 15-18 are objected to because of the following informalities:

(1). Claim 13 has been amended to include the phrase “incoming odd and even numbered picture signals” that is confusing and indefinite since it is not clear what is considered to be the even numbered and odd-numbered picture signals. It is not clear according to what are these numbers assigned.

(2). Claim 13 has been amended to include the phrase “each said memory areas capable of storing a picture and selectable for scanning of a stored picture or for storing a picture ... is selected for scanning by first projector” that is confusing and indefinite. Firstly, it is not clear the phrase after “capable” is part of is not part of the limitations of the claims. “Capable” only refers to **possibility** which does not make the phrase afterward a positive part of the limitations. Secondly, it is not clear what is this “picture” stored in the memory areas and how do they relate to the pictures recited in the earlier part of the claims. It is therefore not clear what are these picture and how do they relate to “stereo projection of pictures”. Also it is not clear how can the projection “scan” the memory areas?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Park (PN. 6,522,351) in view of the patent issued to Lipton et al (PN. 5,416,510).**

Park teaches a method and device for stereo projection of pictures of an object (10, Figures 2-4), wherein picture signals of the object that are intended for left eye and for right eye respectively are formed and received by left and right video cameras and left and right receiving sections (100, and 110). **Park** teaches that the left eye and right picture signals from the cameras are converted to left eye and right eye television image signals, (such as 402 and 404 in Figure 5), and the left and right receiving sections *converts* the left and right television signals to left eye and right eye image signals, which means some sort of “decoding” function is performed. It is also implicitly true that certain **picture storages** for the left and right eye image signals are needed for storing the left eye and right eye image signals such that *repeated scanning* or periodical scanning the storages with the left and right eye image signals is performed, (double scanning sections 122 and 124, or 212 and 214 or 312 and 314, in Figures 2-4), to generate the double scanned image signals which are consequently transmitted to the projector for projection.

This reference has met all the limitations of the claims with the exception that it does not teach explicitly that the incoming left and right eye pictures are formed in cyclically format with odd and even

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numbered pictures and with odd numbered pictures being transmitted to a first projector and the even numbered pictures being transmitted to a second projector. However Park does teach explicitly that the left eye picture and the right eye pictures are *separately* stored, decoded and scanned, whether to make them coming in cyclical form or not does not differentiate the method of projection of the left and right eye pictures to produce stereoscopic image of the object. One skilled in the art certainly can make the cameras (102 and 104) take the left eye and right eye pictures of the object in *time sequential manner* in order for the odd numbers of the pictures representing left eye picture and even number of the pictures representing right eye picture for the benefit of reducing the number of the incoming pictures needed for achieving the projection. Park teaches that the left and right images are alternatively transmitted (130, Figure 2) to the projection device, but it does not teach explicitly in this embodiment to use two projectors one for projecting the left eye picture image signals one for projecting right eye picture image signals. *Park however teaches it is known in the art to use two projectors for such stereo picture projection*, (please see Figure 1). **Lipton** et al in the same field of endeavor teaches explicitly that left eye and right eye pictures of an object obtained by a pair of cameras (120 and 121, Figure 1C) can be transmitted to **right and left projectors** (404 and 403, Figure 4) respectively via recorder and display controller to make the right pictures being projected by the right projector and the left pictures being projected by the left projector for the benefit of using a pair of projectors that allows simultaneous projections of the left and right eye pictures without time delay.

Claim 13 has been amended to include the features of having the first and second picture storage each divided into a plurality of memory areas wherein each of said memory area capable of storing a picture and selectable for scanning a stored picture or for storing a picture and when one memory area is selected for scanning a different memory area is selected for storing. **Park** teaches that each of the left and right image signals (402 and 404) comprised a *plurality of image lines* (A0 to An-1, and B0 to Bn-1), wherein these image lines are scanned line by line to form the double scanned left and

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right images (412 and 414). This suggests that the implicit storages for storing the left image and right image signals (402 and 404) must each have a plurality of memory areas wherein each of the memory areas stores one image line and one of the image lines or the memory area is capable of being scanned to form the double scanned image signals, (412 and 414) while other memory areas are for storing the non-scanned image lines.

With regard to claim 17, the left double scanning section and the right double scanning section taught by Park serve as the first and second picture generator. With regard to claim 18, the *double* scanning section allows scanning of the image signals at a rate *different* from the incoming rate of the incoming picture signal.

7. Claims 13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Park (PN. 4,954,890) in view of the patent issued to Shikama et al (PN. 5,82,538).

Park teaches a method for projecting *three dimensional images* through high luminance liquid crystal display projector, wherein the method includes a signal source (2) for *alternatively and cyclically* emitting image signals intended for left eye and intended for right eye, (please see column 4, lines 12-15), *a left and right signal identifier* (32) serves as the *page selector* for receiving and selectively transferring the left image signal to the first image projector and right image signal to the second image projector (33 and 34, Figure 1), via two different optical paths. The right and left image systems (33 and 34) or the first and second projection *each* comprises CCD, A/D converter and LCD driving circuit, which either implicitly includes decoding and storing the left and right image signals. Although this reference does not teach explicitly of periodically scanning the left and right storage for projecting the left and right image respectively, such feature is either inherently included for scanning technique is used in LCD projector or it is an obvious modification to one skilled in the art to specifically use a scanning method to obtain the image stored in the storage to project it as desired for the scanning method is standard technique used in

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the display device art to obtain the stored image information for efficiently and periodically obtaining the image information.

Claim 13 has been amended to include the feature of having the first and second picture storage each divided into a plurality of memory areas wherein each of said memory area capable of storing a picture and selectable for scanning a stored picture or for storing a picture and when one memory area is selected for scanning a different memory area is selected for storing. Park does not teach such explicitly. However using picture storage with a plurality of memory areas that each memory areas capable of storing a picture and capable of being scanned is well known practice in the image display art. **Shikama et al** in the same field of endeavor teaches a *stereoscopic* image projection apparatus wherein a first and second *frame memory* (35 and 36, Figure 3) that each is divided into *a plurality of memory areas* (L1 to Ln and R1 to Rn) that are capable for storing pictures (L1 to Ln and R1 to Rn) and capable of being scanned by a *scanning circuit* (40) to provide the image data for stereoscopic projection is disclosed. It would then have been obvious to one skilled in the art to apply the teachings of Shikama et al to modify the three-dimensional image projector system of Park to use picture storage having a plurality of memory areas and scanning circuit as the means for presenting a plurality of the left eye and right images or pictures to the LCD projectors for stereoscopic projection for the benefit allowing more than one perspective views be presented and stereoscopically projected.

With regard to claim 15, the feature recited in claim 15 appears to be contradicting to the based claim, for the reasons stated above, it can only be examined in the broadest interpretation. Park teaches that the while the left image is projected to the screen the previously presented right image is projected to the screen again which means the left and right image signals are “associated” with the left and right image systems or projections at the same time.

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With regard to claim 16, Park teaches that the left image system (33) only projects the left image, alternatively presented to it, and the right image system only projects the right image, alternatively presented to it.

With regard to claims 17 and 18, Park teaches that a first liquid crystal panel (11) and a second liquid crystal panel (12) are associated with the first projector and second projector respectively as the “first and second picture generator”. Although this reference does not teach explicitly about the scanning process however it is known in the art to that scanning method could be used in the liquid crystal display panel as the means to obtain the image information, such modification would then have been obvious to one skilled in the art to make use of standard scanning method in the LCD panel as means to retrieve the image information for the benefit of using standard technology to achieve the desired picture generation purpose. The scanning rate is based on the design of the liquid crystal display which could be different from the incoming rate of the image signals.

Response to Arguments

8. Applicant's arguments filed on June 21, 2006 have been fully considered but they are not persuasive. The newly amended claims have been fully considered and they are rejected for the reasons stated above.

9. Applicant's arguments are mainly based on the newly amended features to the claims they have been fully considered and addressed in the reasons for rejections above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing

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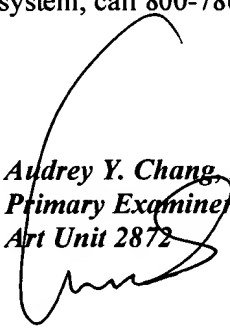
date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Audrey Y. Chang, Ph.D.
Primary Examiner
Art Unit 2872



A. Chang, Ph.D.